

B2
cont.
SUB
C1
amended.

deposited upon the portion of the wafer surface corresponding to the window; and

(f) implanting an edge termination layer into the wafer beneath the surface thereof but not beneath the conductive material.

2. (Cancelled)

B3

3. (Amended) The method for the fabrication of a Schottky barrier diode as described in claim 1, wherein the step of forming an insulating layer comprises forming an oxide layer.

4. The method for the fabrication of a Schottky barrier diode as described in claim 3, wherein the step of implanting an edge termination layer comprises implanting inert ions.

5. (Amended) The method for the fabrication of a Schottky barrier diode as described in claim 4, wherein the inert ions comprise argon ions.

B4

6. (Amended) The method for the fabrication of a Schottky barrier diode as described in claim 1, further comprising the step of applying a treatment to the exposed portion of the SiC wafer surface, the treatment selected from a group consisting of chemical cleaning, surface etching and ion implantation.

7. The method for the fabrication of a Schottky barrier diode as described in claim 1, further comprising the step of depositing a passivation layer over the conductive material and the wafer and removing portions of the passivation layer that cover the conductive material.

8. The method for the fabrication of a Schottky barrier diode as described in claim 1 wherein the conductive material is a metal.

18.(New) A method for the fabrication of a Schottky barrier diode on a SiC wafer, comprising the steps of:

- B5
SUB
C2
- (a) forming an insulating layer on a surface of the SiC wafer;
 - (b) placing a mask having a window on an exposed surface of the insulating layer;
 - (c) etching away a portion of the insulating layer corresponding to the window to expose the SiC wafer therebeneath
 - (d) while retaining the mask in place, depositing conductive material on the mask and exposed portions of the wafer surface; and
 - (e) stripping off the mask so as to leave the conductive material deposited upon the portion of the wafer surface corresponding to the window.

19. (New) The method for the fabrication of a Schottky barrier diode as described in claim 18, further comprising the step of applying a treatment to the exposed portion of the SiC wafer surface the treatment selected from a group consisting of chemical cleaning, surface etching and ion implantation.

20. (New) The method for the fabrication of a Schottky barrier diode as described in claim 17, further comprising the step of implanting an edge termination layer.